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PTBP1 Antibody(N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19710a

Product Information

Application	WB, IHC-P, E
Primary Accession	P26599
Other Accession	Q8WN55, NP_002810.1, NP_114367.1, NP_114368.1, NP_787041.1
Reactivity	Human, Mouse
Predicted	Bovine, Rat, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40967
Calculated MW	59633
Antigen Region	26-55

Additional Information

Gene ID	5725
Other Names	Polypyrimidine tract-binding protein 1, PTB, 57 kDa RNA-binding protein PPTB-1, Heterogeneous nuclear ribonucleoprotein I, hnRNP I, PTBP1, PTB
Target/Specificity	This PTBP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 26-55 amino acids from the N-terminal region of human PTBP1.
Dilution	WB~~1:2000 IHC-P~~1:4000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PTBP1 Antibody(N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTBP1
Synonyms	PTB

Function	Plays a role in pre-mRNA splicing and in the regulation of alternative splicing events. Activates exon skipping of its own pre- mRNA during muscle cell differentiation. Binds to the polypyrimidine tract of introns. May promote RNA looping when bound to two separate polypyrimidine tracts in the same pre-mRNA. May promote the binding of U2 snRNP to pre-mRNA. Cooperates with RAVER1 to modulate switching between mutually exclusive exons during maturation of the TPM1 pre- mRNA. Represses the splicing of MAPT/Tau exon 10 (PubMed:15009664). Binds to polypyrimidine-rich controlling element (PCE) of CFTR and promotes exon skipping of CFTR exon 9, thereby antagonizing TIA1 and its role in exon inclusion of CFTR exon 9 (PubMed:14966131). Plays a role in the splicing of pyruvate kinase PKM by binding repressively to a polypyrimidine tract flanking PKM exon 9, inhibiting exon 9 inclusion and resulting in exon 10 inclusion and production of the PKM M2 isoform (PubMed:20010808). In case of infection by picornaviruses, binds to the viral internal ribosome entry site (IRES) and stimulates the IRES-mediated translation (PubMed:21518806).
Cellular Location	Nucleus. Cytoplasm. Cytoplasm, P-body

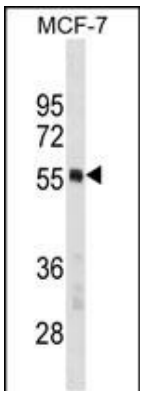
Background

This gene belongs to the subfamily of ubiquitously expressed heterogeneous nuclear ribonucleoproteins (hnRNPs). The hnRNPs are RNA-binding proteins and they complex with heterogeneous nuclear RNA (hnRNA). These proteins are associated with pre-mRNAs in the nucleus and appear to influence pre-mRNA processing and other aspects of mRNA metabolism and transport. While all of the hnRNPs are present in the nucleus, some seem to shuttle between the nucleus and the cytoplasm. The hnRNP proteins have distinct nucleic acid binding properties. The protein encoded by this gene has four repeats of quasi-RNA recognition motif (RRM) domains that bind RNAs. This protein binds to the intronic polypyrimidine tracts that requires pre-mRNA splicing and acts via the protein degradation ubiquitin-proteasome pathway. It may also promote the binding of U2 snRNP to pre-mRNAs. This protein is localized in the nucleoplasm and it is also detected in the perinucleolar structure. Alternatively spliced transcript variants encoding different isoforms have been described.

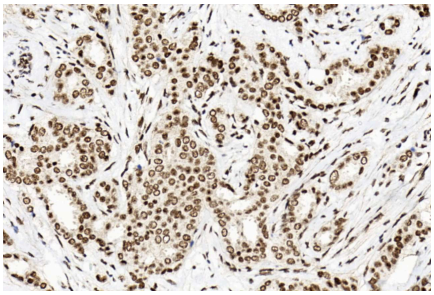
References

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Maynard, C.M., et al. J. Mol. Biol. 397(1):260-277(2010)
Xue, Y., et al. Mol. Cell 36(6):996-1006(2009)

Images



PTBP1 Antibody (N-term) (Cat. #AP19710a) western blot analysis in MCF-7 cell line lysates (35ug/lane).This demonstrates the PTBP1 antibody detected the PTBP1 protein (arrow).



Immunohistochemical analysis of paraffin-embedded human breast cancer tissue using AP19710a.Tissue was fixed with formaldehyde at room temperature, antigen retrieval was by heat mediation with a EDTA buffer (pH9. 0). Samples were incubated with primary antibody(Ready-to-use) for 15 min at room temperature. AmpSeeTM Detection Systems was used as the secondary antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.